

WHAT IS CLAIMED IS:

- 1 1. A fiber optic receiver, comprising:
2 a substrate;
3 a receiver optical sub-assembly (ROSA) mounted on the substrate and
4 comprising a fiber optic connector for coupling to a mating connector of a fiber optic
5 cable;
6 an opto-electronic transducer incorporated within the ROSA and configured to
7 generate an electrical data signal in response to a received optical data signal;
8 a preamplifier circuit incorporated within the ROSA, coupled to the opto-
9 electronic transducer, and operable to linearly amplify an electrical data signal
10 generated by the opto-electronic transducer; and
11 an adjustable bandwidth post-amplifier circuit mounted on the substrate and
12 coupled to an output of the preamplifier circuit.
- 1 2. The fiber optic receiver of claim 1, wherein the post-amplifier circuit
2 comprises a switch for setting a bandwidth response of the post-amplifier circuit in
3 response to a received data rate control signal.
- 1 3. The fiber optic receiver from claim 2, wherein the post-amplifier circuit
2 further comprises a low-pass filter coupled to the switch.
- 1 4. The fiber optic receiver of claim 3, wherein the low-pass filter comprises
2 a capacitor.
- 1 5. The fiber optic receiver of claim 1, wherein the post-amplifier circuit
2 comprises a voltage-variable capacitor.
- 1 6. The fiber optic receiver of claim 1, wherein the post-amplifier circuit
2 comprises a wide bandwidth signal path and a narrow bandwidth signal path.
- 1 7. The fiber optic receiver of claim 6, wherein the post-amplifier circuit
2 further comprises a multiplexer configured to selectively present for output electrical
3 data signals transmitted over one of the wide bandwidth signal path and the narrow
4 bandwidth signal path in response to a received data rate control signal.

1 8. The fiber optic receiver of claim 6, wherein the wide bandwidth signal
2 path comprises an amplifier with a relatively wide bandwidth response and the narrow
3 bandwidth signal path comprises an amplifier with a relatively narrow bandwidth
4 response.

1 9. The fiber optic receiver of claim 1, wherein the post-amplifier comprises
2 an input gain buffer coupled to the output of the preamplifier circuit.

1 10. The fiber optic receiver of claim 1, wherein the pre-amplifier circuit is
2 configured to linearly amplify an electrical data signal generated by the opto-electronic
3 transducer over a specified range of optical data signal power.

1 11. The fiber optic receiver of claim 1, wherein the ROSA comprises a
2 header module mounted on the substrate and configured to house the opto-electronic
3 transducer and the preamplifier.

1 12. The fiber optic receiver of claim 1, wherein the opto-electronic
2 transducer comprises a photodiode.

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